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This listing of claims will replace all prior versions and listings of claims in the reissue application:

**Listing of Claims:**

1. (Previously presented) In a PEM fuel cell having at least one cell comprising a pair of opposite polarity electrodes, a membrane electrolyte interjacent said electrodes for conducting ions therebetween, and an electrically conductive contact element having a working face confronting at least one of said electrodes for conducting electrical current from said one electrode, the improvement comprising: said contact element comprising a corrosion-susceptible metal substrate and an electrically conductive, corrosion-resistant protective coating on said face to protect said substrate from the corrosive environment of said fuel cell, said protective coating comprising a mixture of electrically conductive particles dispersed throughout an oxidation-resistant and acid-resistant, water-insoluble polymeric matrix and having a resistivity no greater than about 50 ohm-cm, said mixture comprising graphite particles having a first particle size and other electrically conductive particles selected from the group consisting of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals and carbon, said other particles having a second particle size less than said first particle size to enhance the packing density of said particles.

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2. (Original) A fuel cell according to claim 1 wherein said carbon comprises carbon black.
3. (Original) A fuel cell according to claim 1 wherein said coating is electrophoretically deposited onto said substrate from a suspension of said particles in an aqueous solution of acid-solubilized polymer.
4. (Original) A fuel cell according to claim 1 wherein a discrete film of said coating is laminated onto said substrate to form said electrically conductive contact element.
5. (Original) A fuel cell according to claim 1 wherein a precursor of said coating is deposited onto said substrate from a solution thereof, dried and cured to form said coating.
6. (Original) A fuel cell according to claim 1 wherein said substrate comprises a first acid-soluble metal underlying a second acid-insoluble, passivating metal layer susceptible to oxidation in said environment.
7. (Original) A fuel cell according to claim 1 wherein said polymer matrix is selected from the group consisting of epoxies, silicones, polyamide-imides, polyether-imides, polyphenols, fluoro-elastomers, polyesters, phenoxy-phenolics, epoxide-phenolics, acrylics and urethanes.

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8. (Previously presented) In a PEM fuel cell having at least one cell comprising a pair of opposite polarity electrodes, a membrane electrolyte interjacent said electrodes for conducting ions therebetween, and an electrically conductive contact element having a working face confronting at least one of said electrodes for conducting electrical current from said one electrode, the improvement comprising: said contact element comprising a corrosion-susceptible metal substrate and an electrically conductive, corrosion-resistant protective coating on said face to protect said substrate from the corrosive environment of said fuel cell, said protective coating comprising a plurality of electrically conductive particles dispersed throughout an oxidation-resistant and acid-resistant, water-insoluble polymeric matrix and having a resistivity no greater than about 50 ohm-cm, said substrate comprising a first acid-soluble metal underlying a second acid-insoluble, passivating layer susceptible to oxidation in said environment.

9. (New) A product comprising:

a fuel cell comprising a bipolar plate and an electrically conductive corrosion-resistant protective coating over the bipolar plate, the coating comprising a water-insoluble polymer and a plurality of first electrically conductive particles, and a plurality of second electrically conductive particles, the first particles being larger than the second particles, the first particles forming interstices therebetween and the at least a portion of the second particle filling the interstices.

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10. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer and a second layer over the first layer, and wherein the coating is over the second layer, and the second layer comprises at least one of a physical vapor deposited metal, a chemical vapor deposited metal and metal clad material.
11. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising a metal.
12. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising aluminum.
13. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising stainless steel.
14. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising titanium.
15. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising a corrosion- susceptible metal.

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16. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising a metal susceptible to oxidation.

17. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a barrier having a passivating oxide film formed thereon.

18. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising a corrosion- susceptible metal, and wherein the substrate further comprises a second layer over the first layer, the second layer comprising a metal having a passivating oxide film formed thereon.

19. (New) A product as set forth in claim 9 wherein the bipolar plate comprises a first layer comprising a corrosion- susceptible metal, and wherein the substrate further comprises a second layer over the first layer, the second layer comprising a metal having a passivating oxide film formed thereon.

20. (New) A product as set forth in claim 9 wherein the coating has a thickness ranging from about 15 to about 25 microns.

21. (New) A product as set forth in claim 9 wherein the first particles have a size ranging from about 5-20 microns.

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22. (New) A product as set forth in claim 9 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

23. (New) A product as set forth in claim 9 wherein the first particles comprise graphite.

24. (New) A product as set forth in claim 9 wherein the second particles comprise carbon black.

25. (New) A product as set forth in claim 9 wherein the first particles comprise graphite and the second particle comprise carbon black.

26. (New) A product as set forth in claim 25 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

27. (New) A product as set forth in claim 9 wherein the second particles comprise at least one of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium

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nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals, carbon, and carbon black.

28. (New) A product as set forth in claim 9 wherein the coating has a thickness ranging from about 5 to about 75 microns.

29. (New) A product as set forth in claim 9 wherein the coating has a thickness ranging from about 15 to about 25 microns.

30. (New) A product as set forth in claim 9 wherein the first particles have a size ranging from about 5-20 microns.

31. (New) A product as set forth in claim 9 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

32. (New) A product as set forth in claim 9 wherein the first particles comprise graphite.

33. (New) A product as set forth in claim 9 wherein the second particles comprise carbon.

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34. (New) A product as set forth in claim 9 wherein the second particles comprise carbon black.

35. (New) A product as set forth in claim 9 wherein the first particles comprise graphite and the second particle comprise carbon black.

36. (New) A product as set forth in claim 35 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

37. (New) A product as set forth in claim 9 wherein the second particles comprise at least one of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals, carbon, and carbon black.

38. (New) A product as set forth in claim 27 wherein the second particle have a size less than the first particles to enhance the packing density of the particles.

39. (New) A product as set forth in claim 9 the polymer comprises at least one of an epoxy, silicone, polyamide-imide, polyether-imide, ployphenol, fluoro-elastomer, polyester, phnoxy-phenolic, epoxide-phenolic, acrylic and urethane.



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40. (New) A product comprising:

a fuel cell comprising an electrically conductive contact element and an electrically conductive corrosion-resistant protective coating over the contact element, the coating comprising a water-insoluble polymer and a plurality of first electrically conductive particles, and a plurality of second electrically conductive particles, the first particles being larger than second particles and filling, the first particles form interstices therebetween and the at least a portion of the second particle filling the interstices.

41. (New) A product as set forth in claim 40 wherein the bipolar plate comprises a first layer and a second layer over the first layer, and wherein the coating is over the second layer, and the second layer comprises at least one of a physical vapor deposited metal, a chemical vapor deposited metal and metal clad material.

42. (New) A product as set forth in claim 40 wherein the contact element comprises a first layer comprising a metal.

43. (New) A product as set forth in claim 40 wherein the contact element comprises a first layer comprising a corrosion-susceptible metal, and wherein the substrate further comprises a second layer over the first layer, the second layer comprising a metal having a passivating oxide film formed thereon.

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44. (New) A product as set forth in claim 43 wherein the first layer comprises aluminum, and the second layer comprises at least one of stainless steel and titanium.

45. (New) A product comprising:

a fuel cell comprising an electrically conductive contact element and an electrically conductive corrosion-resistant protective coating over the contact element, the coating comprising a water-insoluble polymer and a plurality of first electrically conductive particles comprising graphite, and a plurality of second electrically conductive particles, the first particles being larger than second particles and filling, the first particles forming interstices therebetween and at least a portion of the second particle filling the interstices.

46. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising a metal.

47. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising aluminum.

48. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising stainless steel.

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49. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising titanium.

50. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising a corrosion- susceptible metal.

51. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising a metal susceptible to oxidation.

52. (New) A product as set forth in claim 45 wherein the contact element comprises a barrier having a passivating oxide film formed thereon.

53. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer comprising a corrosion- susceptible metal, and wherein the substrate further comprises a second layer over the first layer, the second layer comprising a metal having a passivating oxide film formed thereon.

54. (NEW) A product as set forth in claim 45 wherein the coating has a thickness ranging from about 5 to about 75 microns.

55. (New) A product as set forth in claim 45 wherein the coating has a thickness ranging from about 15 to about 25 microns.

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55. (New) A product as set forth in claim 45 wherein the first particles have a size ranging from about 5-20 microns.

56. (New) A product as set forth in claim 45 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

57. (New) A product as set forth in claim 45 wherein the bipolar plate comprises a first layer and a second layer over the first layer, and wherein the coating is over the second layer, and the second layer comprises at least one of a physical vapor deposited metal, a chemical vapor deposited metal and metal clad material.

58. (New) A product as set forth in claim 45 wherein the second particles comprise carbon.

59. (New) A product as set forth in claim 45 wherein the second particles comprise carbon black.

60. (New) A product as set forth in claim 45 wherein the first particles comprise graphite and the second particle comprise carbon black.

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61. (New) A product as set forth in claim 60 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

62. (New) A product as set forth in claim 45 wherein the second particles comprise at least one of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals, carbon, and carbon black.

63. (New) A product as set forth in claim 45 the polymer comprises at least one of an epoxy, silicone, polyamide-imide, polyether-imide, polyphenol, fluoro-elastomer, polyester, phenoxy-phenolic, epoxide-phenolic, acrylic and urethane.

64. (New) A product comprising:

a fuel cell comprising an electrically conductive contact element and an electrically conductive corrosion-resistant protective coating over the contact element, the coating comprising a water-insoluble corrosion-resistant polymer and a plurality of first electrically conductive particles, the contact element comprising a first layer comprising a corrosion-susceptible metal and a second layer comprising a metal over the first layer, and wherein the coating overlies the second layer.

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65. (New) A product as set forth in claim 64 wherein the electrically conductive contact element comprises a bipolar plate.

66. (New) A product as set forth in claim 64 further comprising a plurality of second electrically conductive particles, the first particles being larger than the second particles, the first particles forming interstices therebetween and the at least a portion of the second particle filling the interstices.

67. (New) A product as set forth in claim 66 wherein the first particles comprise graphite.

68. (New) A product as set forth in claim 66 wherein the second particles comprise carbon black.

69. (New) A product as set forth in claim 66 wherein the first particles comprise graphite and the second particle comprise carbon black.

70. (New) A product as set forth in claim 69 wherein the first particles have a size ranging from about 5-20 microns and the second particles have a size ranging from about 0.5-1.5 microns.

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71. (New) A product as set forth in claim 66 wherein the second particles comprise at least one of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals, carbon, and carbon black.

72. (New) A product as set forth in claim 64 wherein the second layer comprises a metal clad.

73. (New) A product as set forth in claim 64 wherein the second layer comprises a physical vapor deposited metal.

74. (New) A product as set forth in claim 73 wherein the physical vapor deposited metal comprises titanium.

75. (New) A product as set forth in claim 73 wherein the physical vapor deposited metal comprises stainless steel.

76. (New) A product as set forth in claim 64 wherein the second layer comprises a chemical vapor deposited metal.

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77. (New) A product as set forth in claim 1 wherein the bipolar plate comprises a first exterior sheet and a second exterior sheet, and wherein each of the first exterior sheet and second exterior sheet includes an underside including a plurality channels to permit coolant to flow through the bipolar plate.

78. (New) A product as set forth in claim 45 wherein the contact element comprises a first layer and a second layer over the first layer, and wherein the coating is over the second layer, and the second layer comprises at least one of a physical vapor deposited metal, a chemical vapor deposited metal and metal clad material.

79. (New) A PEM fuel cell comprising:

at least one cell comprising a pair of opposite polarity electrodes, a membrane electrolyte adjacent each of said electrodes for conducting ions therebetween, and an electrically conductive contact element having a working face confronting at least one of said electrodes for conducting electrical current from said one electrode, said contact element comprising a corrosion-susceptible metal substrate and an electrically conductive, corrosion-resistant protective coating on said face to protect said substrate from the corrosive environment of said fuel cell, said protective coating comprising a mixture of electrically conductive particles dispersed throughout an oxidation-resistant and acid-resistant, water-insoluble polymeric matrix, said mixture comprising graphite particles having a first particle size and other electrically conductive particles comprising at least one of gold, platinum, nickel, palladium, rhodium, niobium,



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titanium carbide, titanium nitride, titanium diboride, chromium- alloyed titanium, nickel-alloyed titanium, rare earth metals and carbon, and mixtures thereof, said other particles having a second particle size less than said first particle size to enhance the packing density of said particles.

80. (New) A product comprising:

a fuel cell comprising an electrical conductive contact element and an electrically conductive corrosion-resistant protective coating over the contact element, the coating comprising a water-insoluble polymer comprising at least one of epoxy, silicone, polyamide-imide, polyether-imide, ployphenol, fluoro-elastomer, polyester, phnoxy-phenolic, epoxide-phenolic, acrylic and urethane. and a plurality of first electrically conductive particles.

81. (New) A product as set forth in claim 80 wherein the first electrically conductive particle comprises graphite.

82. (New) A product as set forth in claim 80 further comprising a plurality of second electrically conductive particles, the first particles being larger than the second particles, the first particles forming interstices therebetween and the at least a portion of the second particle filling the interstices.

83. (New) A product as set forth in claim 82 wherein the second electrically conductive particles comprise at least one of gold, platinum, nickel, palladium, rhodium,

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niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals, carbon, and carbon black.

84. (New) A product as set forth in claim 82 wherein the first electrically conductive particles comprise graphite and the second electrically conductive particles comprise carbon black.

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